

## COMMENTARY

## Income inequalities and health disparities

Socially based disparities in health status continue to plague even the most egalitarian societies despite public policies that aim to reduce or eliminate them.<sup>1-4</sup> In the United States, researchers have been preoccupied with the overwhelming health disparities, such as those mortality rates and chronic disease prevalence, that are related to race and ethnicity. But in other developed countries, public health researchers have focused on health disparities as they are related to inequalities in the distribution of income.<sup>1,2</sup>

Epidemiologists have long known that poverty is associated with higher rates of morbidity and mortality. In addition, a growing body of research has found a positive association between mortality and the extent of inequalities in income in a particular society.<sup>3,4</sup> But is this observed relation simply a statistical artifact caused by the adverse effects of poverty on an individual's health status and by the larger proportion of poor people that exists in societies with large inequalities in income? Or is the observed relation also due to some separate effect of living in a very unequal society. This subtle distinction is analogous to the questions that are often asked about the observed health disparities between black and white Americans: how much of the disparity is related to the fact that more black Americans live in poverty and how much is caused by the effects of racial discrimination and other aspects of racism?

Wolfson and colleagues present evidence that the observed relation between mortality in a state and inequalities in income in that state is not a statistical artifact. They found that differences in mortality among states were not accounted for simply by the different proportions of residents with lower incomes living in each state. Even after accounting for the individual-level relation between mor-

tality and income, they found that mortality was associated with the extent of the inequality itself.

This issue has important public policy implications. To what extent can these inequalities be addressed by increasing individual opportunity through, perhaps, enhancing educational opportunities or providing income support? If the relation between inequalities in income and health were simply a statistical artifact, policymakers could focus on transferring sufficient income from more affluent people to those with the lowest incomes to raise their standard of living to a level that eliminates this hazard. If, however, the existence of inequalities in income has an adverse effect on health independent of the effects of poverty, then public policies should involve a more complete and fundamental redistribution of income: these policies should seek to equalize incomes to the maximum extent possible.

The study by Wolfson and colleagues provides some support for those who argue for highly redistributive policies. From the vantage point in the United States, with its growing inequalities in income, even policies that are more modest but are designed to reduce poverty would be a welcome public health intervention. These are important issues for researchers in all countries.

## References

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**Competing interests:**  
None declared

*West J Med* 2000;172:25

## NETPHILES

**Babies in pain** Assessment of neonatal pain is difficult, yet its control is important because, untreated, it has both short term and long term negative effects. A quick search on Google ([www.google.com](http://www.google.com)) brings up the impressive KidsHealth.org ("Our mission is to provide the best children's health information on the World Wide Web"), which scores well on being explicit about its sources, with a large editorial team of doctors. The information on pain is of reasonable quality ([kidshealth.org/parent/healthy/pain.html](http://kidshealth.org/parent/healthy/pain.html)), but there are the usual problems: the general discussion cannot specifically address the question that directs the browser to the site, nor does it link to further sources of information. Bridging the gap between consumer and medical information is [www1.mosby.com/Mosby/Wong/hcom\\_wong\\_w43.html](http://www1.mosby.com/Mosby/Wong/hcom_wong_w43.html), which offers among other things, practical instructions for making a sucrose solution—1 tsp of sucrose in 4 T of water makes a 24% solution. At Islamic Voice ([www.islamicvoice.com/june.98/science.htm#Top](http://www.islamicvoice.com/june.98/science.htm#Top)) there's a reminder that the prophet has long recommended placing a date in the mouth of male infants about to be circumcised. At the other end of the spectrum, just about as specialized as it is possible to be, is the Pediatric Pain Letter at [is.dal.ca/~pedpain/pplet\\_toc.htm#toc](http://is.dal.ca/~pedpain/pplet_toc.htm#toc).

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